

REMARKS

Claims 1, 2, 4-6, and 8--22 are pending in the application. The specification and claims 1, 4, and 19 have been amended for consistency and to better describe certain aspects of the invention. Claims 21 and 22 have been added to further describe the invention. Claims 3 and 7 have been cancelled. Favorable reconsideration in light of the amendments, the new claims, and the remarks which follow is respectfully requested.

The Amendments

The independent claims have been amended to specify:

1) that the saturated monocarboxylic acid or its salt contains impurities in an amount of 3 wt% or less, wherein the impurities are compounds selected from the group consisting of paraffin compounds, ketone compounds, long chain aldehydes, carboxylic acids having 3 carbon atoms or less, and carboxylic acids having at least 11 carbon atoms,

2) that the molar ratio of the inorganic magnesium compound and the saturated monocarboxylic acid or its salt is 1:2.02 to 1:3 and the reaction is conducted in water or an organic solvent containing 10 wt% or more of water, and

3) that the organic acid metal salt is characterized in that a solution prepared by dissolving the organic acid metal salt in ethanol at a concentration of 40 wt% is clear after the solution is allowed to stand at 30°C for one hour.

An explanation of these amendments follows.

First, the independent claims have been amended to specify that the organic acid metal salt is obtained by the use of the specific monocarboxylic acid in which the content of impurities is quite low, i.e., 3 wt% or less, as the saturated monocarboxylic acid contains at least 97 wt% of a saturated monocarboxylic acid. Since the content of the impurities such as paraffin compounds, ketone compounds, and long chain aldehydes is quite low, contamination of these impurities into the resultant organic acid metal salt can be mitigated/prevented. As a result, the use of a carboxylic acid

containing at least 97 wt% of the above-mentioned monocarboxylic acid 3 wt% or less of impurities contributes to the production of organic acid metal salt is high purity. Support and further discussion of this aspect of the invention exists in the specification, for example, page 6, the first and second paragraphs.

Second, the independent claims have been amended to specify that the organic acid metal salt is obtained by the reaction in a specific condition. Namely, the reaction of the inorganic magnesium compound and the saturated monocarboxylic acid or its salt is carried out in a molar ratio of 1:2.02 to 1:3, and conducted in water or an organic solvent containing 10 wt% or more of water. The molar ratio of 1:2.02 to 1:3 is one of the important factors for obtaining an organic acid metal salt with high purity, and can be dissolved in various solvents.

When the reaction is carried out in the conditions required by the independent claims, a clear solution can be obtained as a reaction mixture. The organic acid metal salt obtained from such clear solution has high level of purity, and the above-mentioned impurities are hardly present, if at all, in the resultant metal salt. In this way, the required reaction conditions also contribute to the production of an organic acid metal salt with high purity. Support and further discussion of this aspect of the invention exists in the specification, for example, page 10, the third paragraph.

In this way, the resultant organic acid metal salt has high purity, namely, the metal salt contains at least 99 wt% of an organic acid magnesium salt, as required by the independent claims. Consequently, the metal salt has an excellent solubility in various solvents. When the organic acid metal salt is dissolved in an organic solvent, the resultant solution is clear and has good temporal stability. This is further explained on page 5, the first paragraph of the specification. In this connection, the independent claims have been amended to specify that when the a solution prepared by dissolving the obtained organic acid metal salt in ethanol at a concentration of 40 wt%, the solution is clear after it is allowed to stand at 30°C for one hour. Support and further discussion of this aspect of the invention exists in the specification, for example, page 13, the second full paragraph.

What this means is that when the organic acid metal salt is prepared into a coating liquid, as described in claims 10 and 17, the resultant coating liquid has excellent temporal stability, and can form a magnesium oxide film having higher strength and excellent transparency.

Amendment to the Specification

The specification on page 17 has been amended to correct a typographical error. It can be readily seen that the amendment to claim 17 addresses an obvious error. For Table 3 on page 27, valeric acid was mistakenly typed instead of butyric acid. This is an obvious error, especially when referencing Table 1, which describes butyric acid with a purity of 96.0%, and Table 3 lists the acid in question with a purity of 96.0%. The acid in question with a purity of 96.0% in Table 3 should have been the same acid of Table 1; that is, butyric acid.

The Indefiniteness Rejection

Claim 19 has been rejected under 35 U.S.C. § 112, second paragraph, with regard to the dependence wording concerning claim 4. Claim 19 has been amended as suggested by the Examiner without changing the scope thereof.

The Obviousness Rejection

Claims 1-9, 15, and 16 have been rejected under 35 U.S.C. § 103(a) over Rieber et al (U.S. Patent 4,235,794). To establish a *prima facie* case of obviousness, three basic criteria must be shown. First, there must be some suggestion or motivation, either in the cited art or in the knowledge generally available to one of ordinary skill in the art, to modify the cited art or to combine the cited art. Second, there must be a reasonable expectation of success. Finally, the cited art must teach or suggest all the claim features. See MPEP 706.02(j).

Conventionally, an organic acid magnesium salt is prepared by a reaction of a carboxylic acid or its salt with an inorganic magnesium compound in water in the form of

suspension reaction, such as that described in Rieber et al. An organic acid magnesium salt obtained from this suspension has low purity. According to experiments of the present inventors, a magnesium salt of a monocarboxylic acid having 6 to 9 carbon atoms prepared by such a suspension reaction in ethanol in an amount of about only 2 wt%.

The significant advantage of the invention is that a specific monocarboxylic acid is employed that contains very low amount of impurities as required by the independent claims (impurities 3 wt% or less), and the reaction is conducted using specific conditions (molar ratio, solvent identity). Thus, a clear solution is obtained as the reaction mixture. The organic metal salt obtained from such a clear solution has high solubility in various solvents such as ethanol. The independent claims specify that the metal salt of the can be dissolved in ethanol in an amount of 40 wt%. This is significant because this amount is about 20 times or more of the metal salt obtained by the conventional method using a suspension reaction described above.

Rieber et al relates to a method for preparing metal soap granulates. In Rieber et al, metal salt formation reaction is carried out in water as suspension reaction. For example, see each of examples of Rieber et al in columns 5-11. Specifically in Example 1, a hollow-sphered granulate is formed in the reaction mixture. This indicates that the metal salt includes a substantial amount of impurities, and thus, the resultant solubility in an organic solvent such as ethanol is poor. In this way, Rieber et al is quite different from the claimed invention.

There is no teaching or suggestion in Rieber et al that would have motivated one skilled in the art to provide an organic acid metal salt obtained by reacting a saturated monocarboxylic acid or its salt and an inorganic magnesium compound where 1) the saturated monocarboxylic acid or its salt contains impurities in an amount of 3 wt% or less, wherein the impurities are compounds selected from the group consisting of paraffin compounds, ketone compounds, long chain aldehydes, carboxylic acids having 3 carbon atoms or less, and carboxylic acids having at least 11 carbon atoms, 2) the molar ratio of the inorganic magnesium compound and the saturated monocarboxylic

acid or its salt is 1:2.02 to 1:3 and the reaction is conducted in water or an organic solvent containing 10 wt% or more of water, and/or 3) the organic acid metal salt is characterized in that a solution prepared by dissolving the organic acid metal salt in ethanol at a concentration of 40 wt% is clear after the solution is allowed to stand at 30°C for one hour. Therefore, Rieber et al cannot render claims 1-9, 15, and 16 obvious.

The Novelty Rejections

Claims 1-3, 10-14, and 17-20 have been rejected under 35 U.S.C. § 102(b) over JP 9-95627. JP 9-95627 merely discloses a coating liquid for forming a metal oxide film containing an organic acid metal salt. JP 9-95627 is silent on the method for producing an organic acid metal salt.

To establish anticipation, each and every claim feature must be disclosed in a single cited art document. Claims 1 requires an organic acid metal salt obtained by reacting a saturated monocarboxylic acid or its salt and an inorganic magnesium compound where 1) the saturated monocarboxylic acid or its salt contains impurities in an amount of 3 wt% or less, wherein the impurities are compounds selected from the group consisting of paraffin compounds, ketone compounds, long chain aldehydes, carboxylic acids having 3 carbon atoms or less, and carboxylic acids having at least 11 carbon atoms, 2) the molar ratio of the inorganic magnesium compound and the saturated monocarboxylic acid or its salt is 1:2.02 to 1:3 and the reaction is conducted in water or an organic solvent containing 10 wt% or more of water, and 3) the organic acid metal salt is characterized in that a solution prepared by dissolving the organic acid metal salt in ethanol at a concentration of 40 wt% is clear after the solution is allowed to stand at 30°C for one hour.

JP 9-95627 fails to disclose the organic acid metal salt of the claimed invention. In particular, JP 9-95627 fails to disclose, teach, or suggest a saturated monocarboxylic acid that contains impurities in an amount of 3 wt% or less and the reaction conditions (molar ratio, solvent identity). JP 9-95627 also fails to disclose, teach, or suggest an

organic acid metal salt obtained by reacting a saturated monocarboxylic acid or its salt and an inorganic magnesium compound where the saturated monocarboxylic acid or its salt contains impurities in an amount of 3 wt% or less, wherein the impurities are compounds selected from the group consisting of paraffin compounds, ketone compounds, long chain aldehydes, carboxylic acids having 3 carbon atoms or less, and carboxylic acids having at least 11 carbon atoms and where the organic acid metal salt is characterized in that a solution prepared by dissolving the organic acid metal salt in ethanol at a concentration of 40 wt% is clear after the solution is allowed to stand at 30°C for one hour. Since JP 9-95627 does not disclose all of the claimed features, JP 9-95627 cannot anticipate claims 1-3, 10-14, and 17-20.

Claims 1-7, 9, 15, and 16 have been rejected under 35 U.S.C. § 102(b) for lacking novelty over Skov et al (U.S. Patent 3,899,588). Skov et al merely discloses the reaction of alkanoic and ammonia, and the ammonia can be replaced by magnesium hydroxide. The reaction is carried out in water solvent.

Skov et al fails to disclose, teach, or suggest an organic acid metal salt obtained by reacting a saturated monocarboxylic acid or its salt and an inorganic magnesium compound where 1) the saturated monocarboxylic acid or its salt contains impurities in an amount of 3 wt% or less, wherein the impurities are compounds selected from the group consisting of paraffin compounds, ketone compounds, long chain aldehydes, carboxylic acids having 3 carbon atoms or less, and carboxylic acids having at least 11 carbon atoms, 2) the molar ratio of the inorganic magnesium compound and the saturated monocarboxylic acid or its salt is 1:2.02 to 1:3 and the reaction is conducted in water or an organic solvent containing 10 wt% or more of water, and/or 3) the organic acid metal salt is characterized in that a solution prepared by dissolving the organic acid metal salt in ethanol at a concentration of 40 wt% is clear after the solution is allowed to stand at 30°C for one hour. Since Skov et al does not disclose all of the claimed features, Skov et al cannot anticipate claims 1-7, 9, 15, and 16.

Claims 1, 3, 10, 12, 13, 14, and 17-20 have been rejected under 35 U.S.C. § 102(b) over Cavazza (U.S. Patent 5,180,850). Cavazza merely discloses that a metal salt formation reaction in ethanol solvent.

Cavazza fails to disclose, teach, or suggest an organic acid metal salt obtained by reacting a saturated monocarboxylic acid or its salt and an inorganic magnesium compound where 1) the saturated monocarboxylic acid or its salt contains impurities in an amount of 3 wt% or less, wherein the impurities are compounds selected from the group consisting of paraffin compounds, ketone compounds, long chain aldehydes, carboxylic acids having 3 carbon atoms or less, and carboxylic acids having at least 11 carbon atoms, 2) the molar ratio of the inorganic magnesium compound and the saturated monocarboxylic acid or its salt is 1:2.02 to 1:3 and the reaction is conducted in water or an organic solvent containing 10 wt% or more of water, and/or 3) the organic acid metal salt is characterized in that a solution prepared by dissolving the organic acid metal salt in ethanol at a concentration of 40 wt% is clear after the solution is allowed to stand at 30°C for one hour. Since Cavazza does not disclose all of the claimed features, Cavazza cannot anticipate claims 1, 3, 10, 12, 13, 14, and 17-20.

Petition for Extension of Time

A petition and request for a three month extension of time is hereby made. A Credit Card charge form is enclosed herewith to pay the petition fees.

Should the Examiner believe that a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

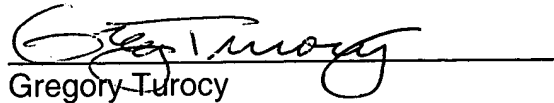
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In the event any fees are due in connection with the filing of this document, the Commissioner is authorized to charge those fees to our Deposit Account No. 50-1063.

Respectfully submitted,

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A handwritten signature in cursive script, appearing to read "Gregory Turocy", is written over a horizontal line.

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